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Effects of Integrated Psychosocial Stimulation and Unconditional Cash Transfer (UCT) on Children's Development in Rural Bangladesh

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Background: Many randomized controlled trials have proven that psychosocial stimulation improves children's cognitive development. Literatures also support that conditional cash transfer programme in low- and middle-income countries improve children's health and development. Very few studies documented benefits of unconditional cash for children health and development. We integrated psychosocial stimulation into unconditional cash for the poor Bangladeshi mothers to examine the effects on children's cognitive, language and motor development.

Methods: It was a cluster randomized controlled trial with three arms: i) Psychosocial stimulation (PS) and Unconditional cash (UCT), ii) only UCT and iii) Comparison, conducted in a sub-district of rural Bangladesh from July, 2017 to December, 2018. We conducted this study in 33 clusters, with 11 clusters randomly assigned to each arm. The participants were poor mothers eligible to receive maternity allowance based on criteria set by Government of Bangladesh. The mothers in two intervention groups received UCT of 6.2 USD (500 Bangladeshi Taka) per month. The children were 6-14 months old at enrollment. Psychosocial stimulation was provided by trained local women for one year. The adapted version of Bayley-III was used to measure the main outcomes: cognitive, language and motor composite scores. Children's behaviour measured on Wolke's ratings, quality of home stimulation measured using family care indicators (FCI) and Rosenberg's maternal self-esteem were secondary outcomes. The analysis was intention to treat.

Results: Of the 594 mother-child dyads, 40 (6.8%) were lost to follow-up. Children in the UCT+PS had significant improvement in their cognitive ($B=3.73$, 95% CI:1.27, 6.19, $p=0.003$), language (2.82, 95% CI:0.53,5.10, $p=0.016$) and motor (2.65, 95% CI:0.24,5.06, $p=0.031$) scores compared to comparison group. They also had significantly higher cognitive (2.96, 95% CI:0.46,5.47, $p=0.021$) and language (2.73, 95% CI:0.39,5.08, $p=0.022$) scores compared to only UCT. They were more responsive to examiner (0.30, 95% CI:0.08,0.52, $p=0.007$) and (0.30, 95% CI:0.06,0.52, $p=0.012$) compared to the control and only UCT groups respectively. The mothers' self-esteem was significantly higher in UCT+PS (2.46, 95% CI:0.94,3.98, $p=0.002$) and only UCT (1.67, 95% CI:0.015,3.20, $p=0.032$) compared to the comparison group. Home stimulation was also significantly higher in UCT+PS (3.07, 95% CI:2.25,3.88, $p<0.001$) and UCT only (2.34, 95% CI:1.51,3.17), $p<0.001$) compared to comparison group.

Conclusion: Psychosocial stimulation integrated into UCT programme benefitted children's development. UCT improved mother's self-esteem. Safety net platform could be used to render child stimulation programmes for the poor in low resources settings.